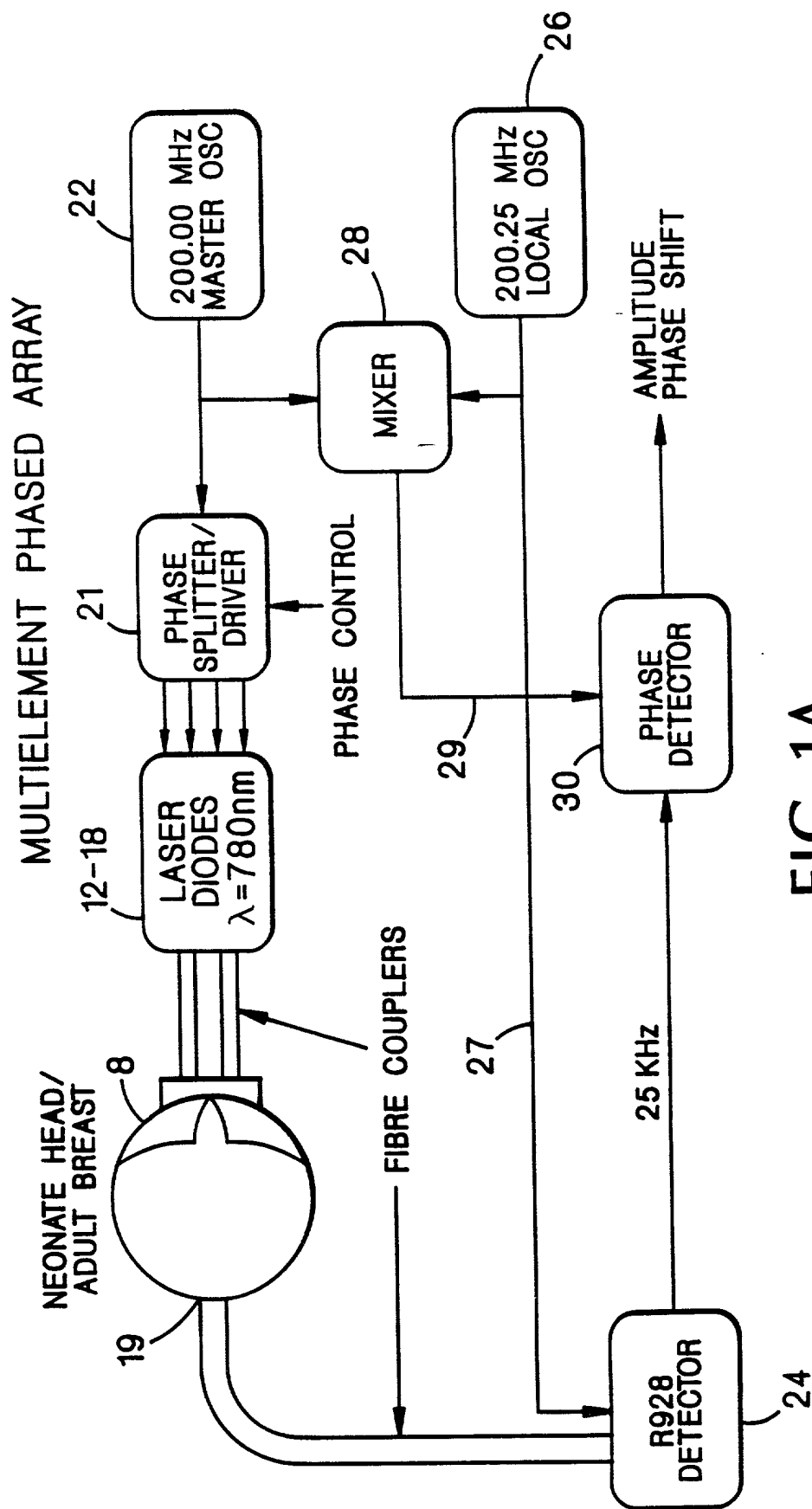


FIG. 1



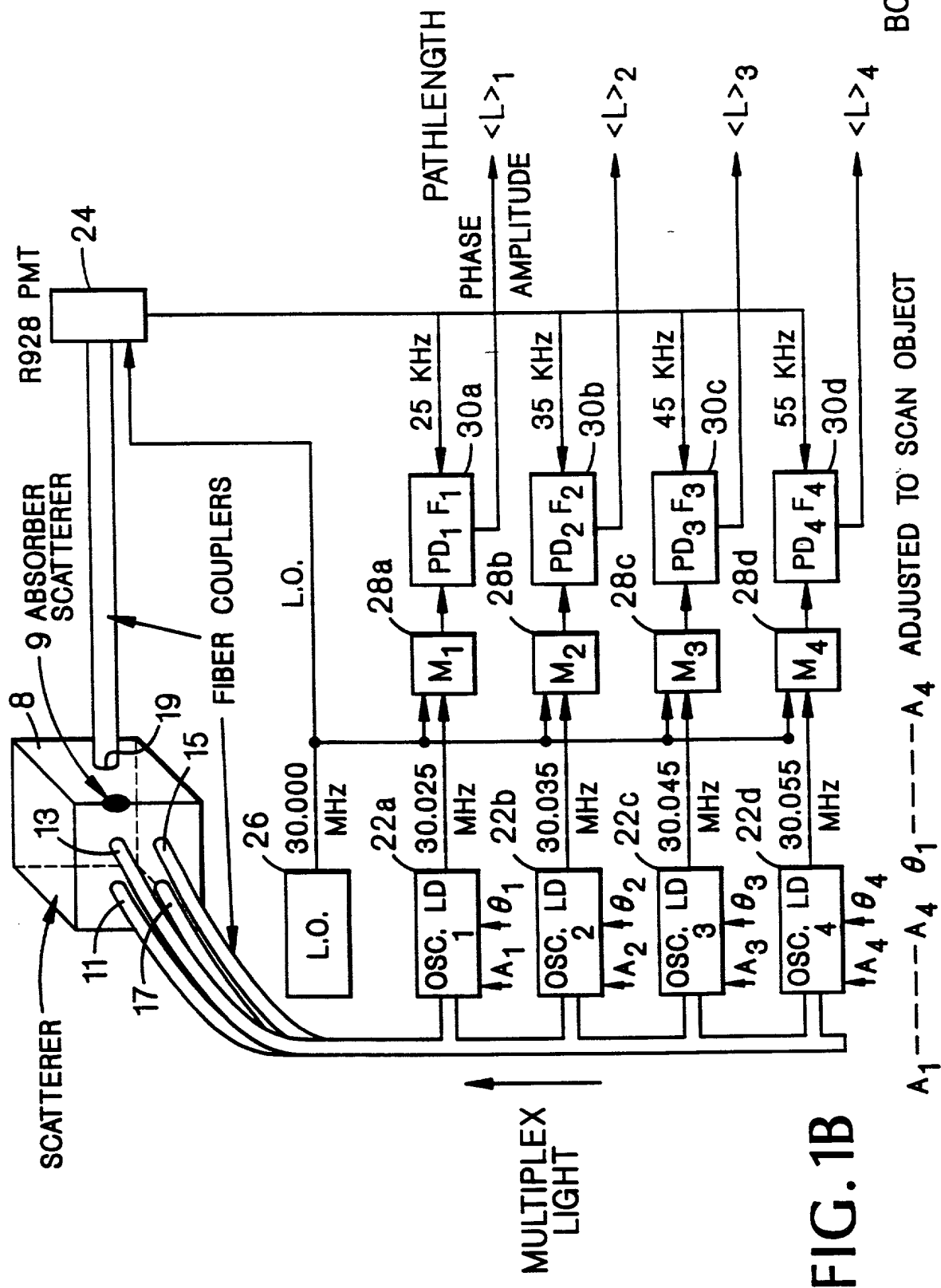
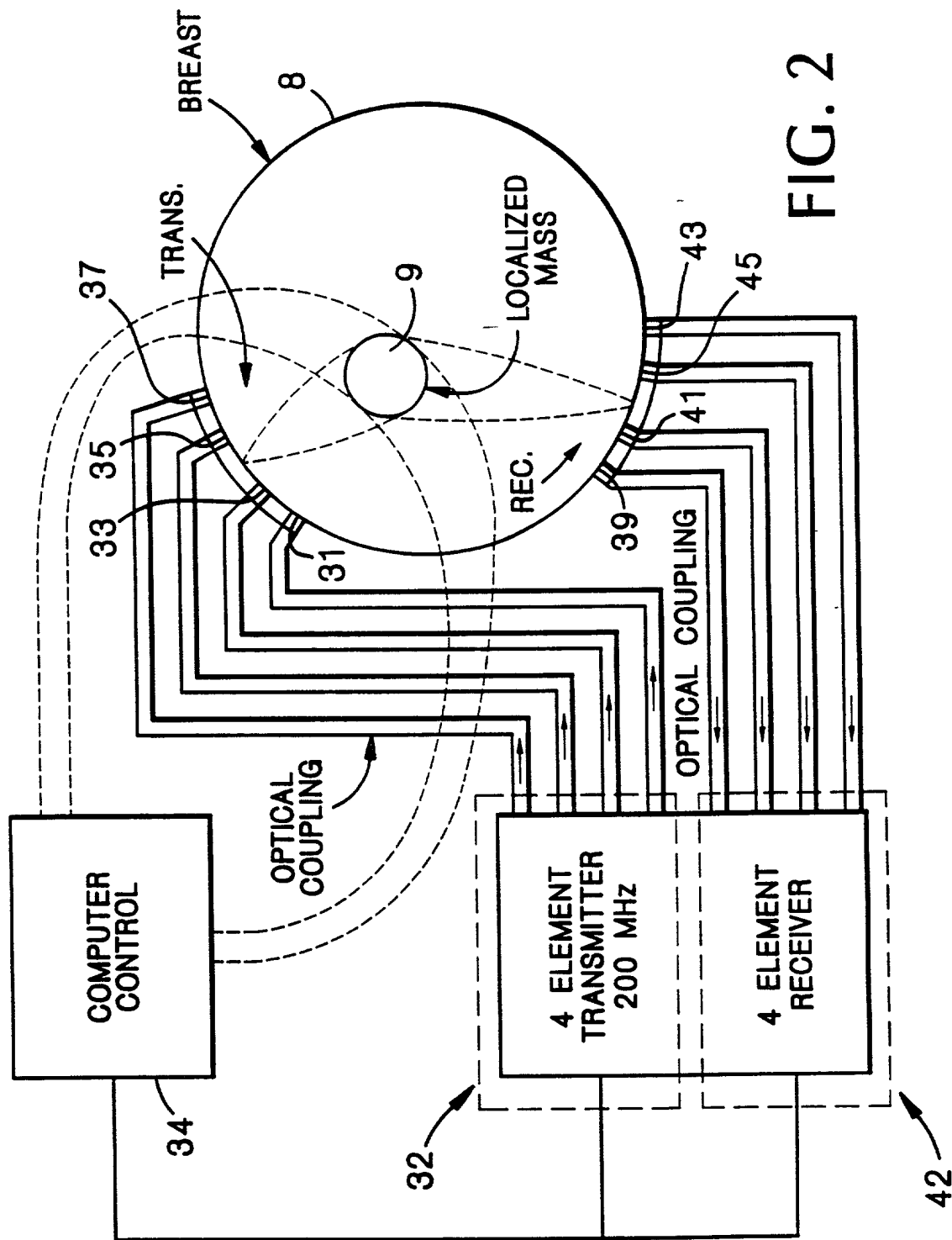
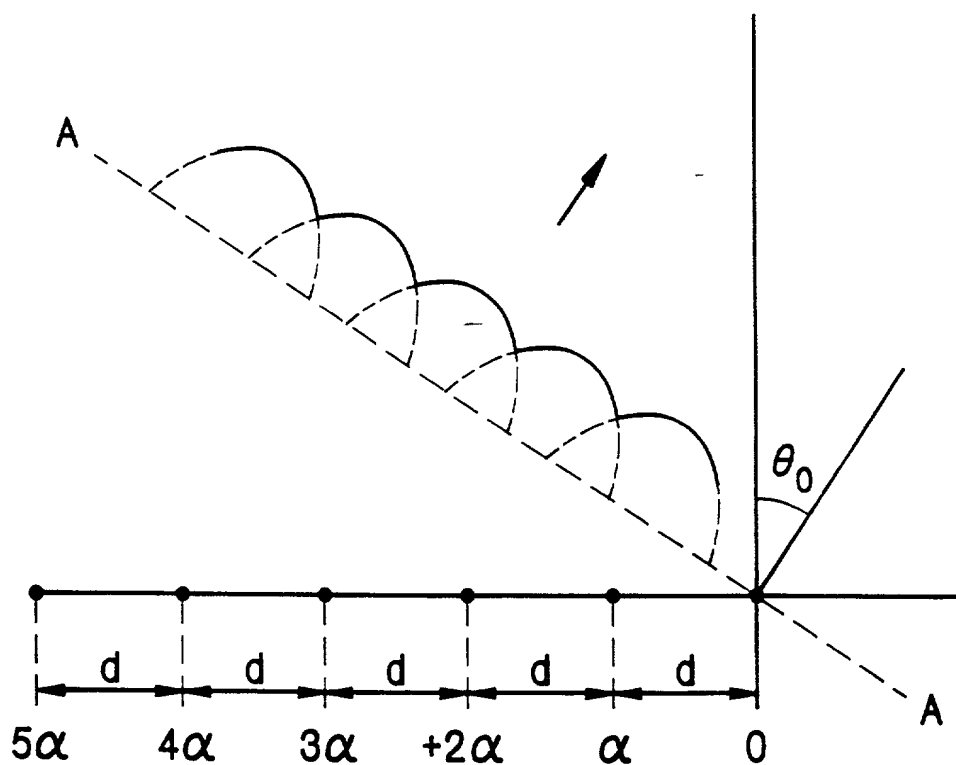


FIG. 1B





$$I_n e^{j\omega(t-t_n)}$$

$$\alpha = \frac{2\pi}{\lambda} d \sin \theta_0$$

$$t_n = n \frac{d}{c} \sin \theta_0 \quad n = 0, 1, 2, \dots$$

FIG. 2A

# ANTIPHASE MULTIELEMENT TRANSMITTER-RECEIVER ARRAYS

## ARRANGEMENT OF PHASES FOR SCAN

TRANSMITTER ARRAY	1	-		+	+	+	+	+	+
	2	-	-		+	+	+	+	+
	3	-	-	-		+	+	+	+
	4	-	-	-	-		+	+	+
	5	-	-	-	-	-		+	+
RECEIVER ARRAY POSITION		1	2	3	4	5			

t=0

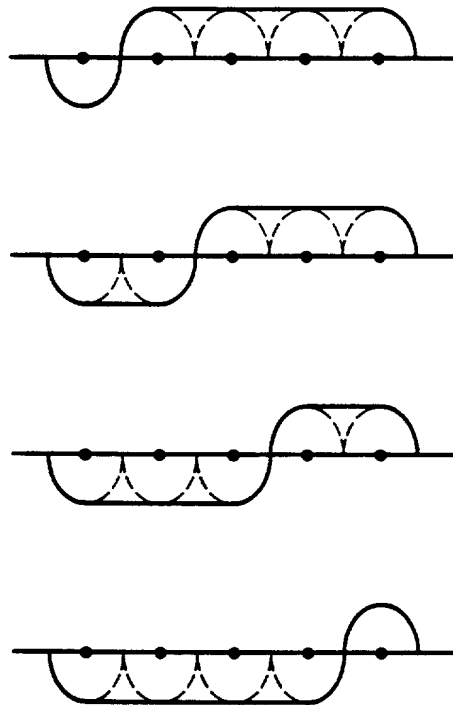


FIG. 2B

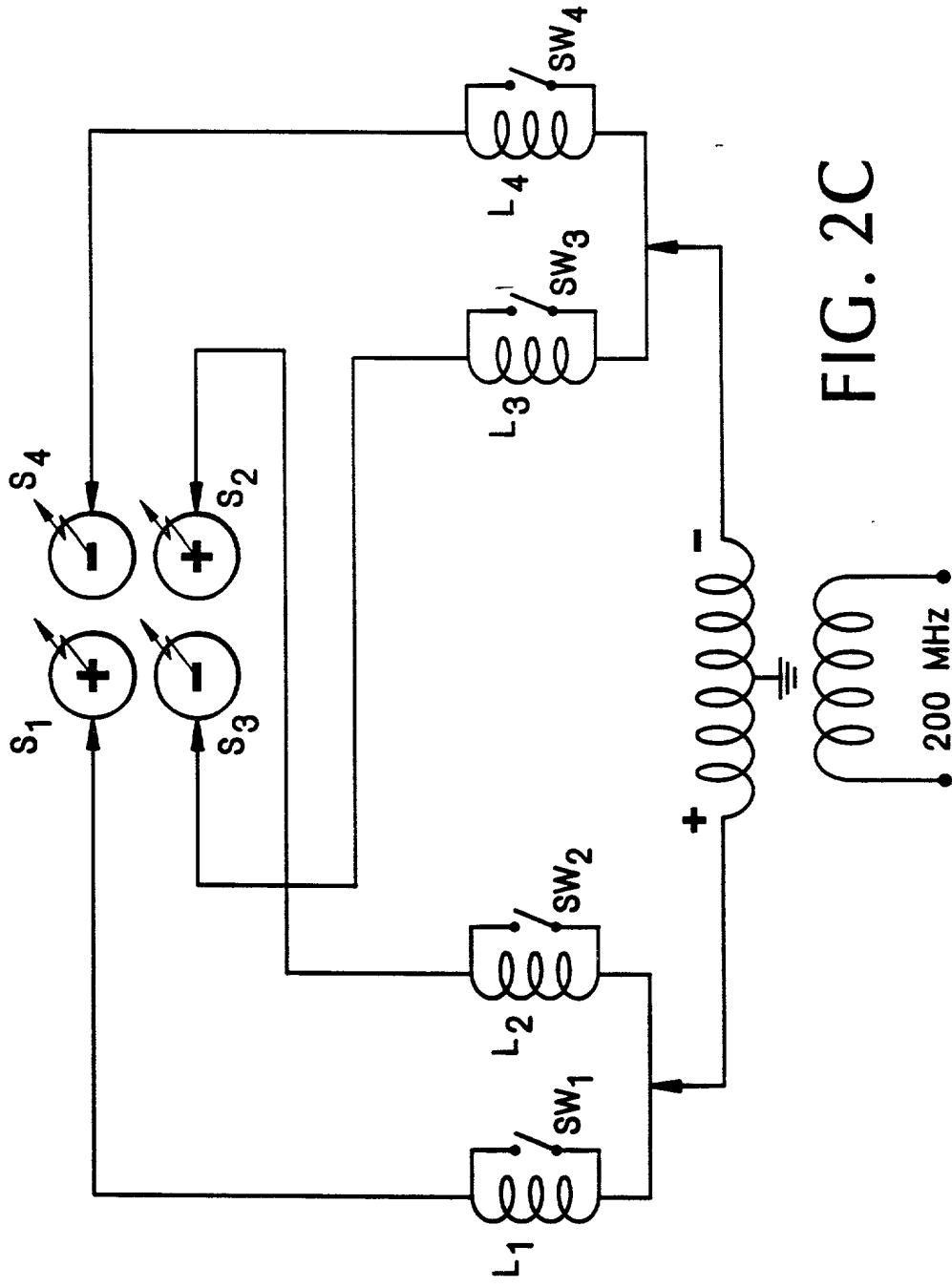
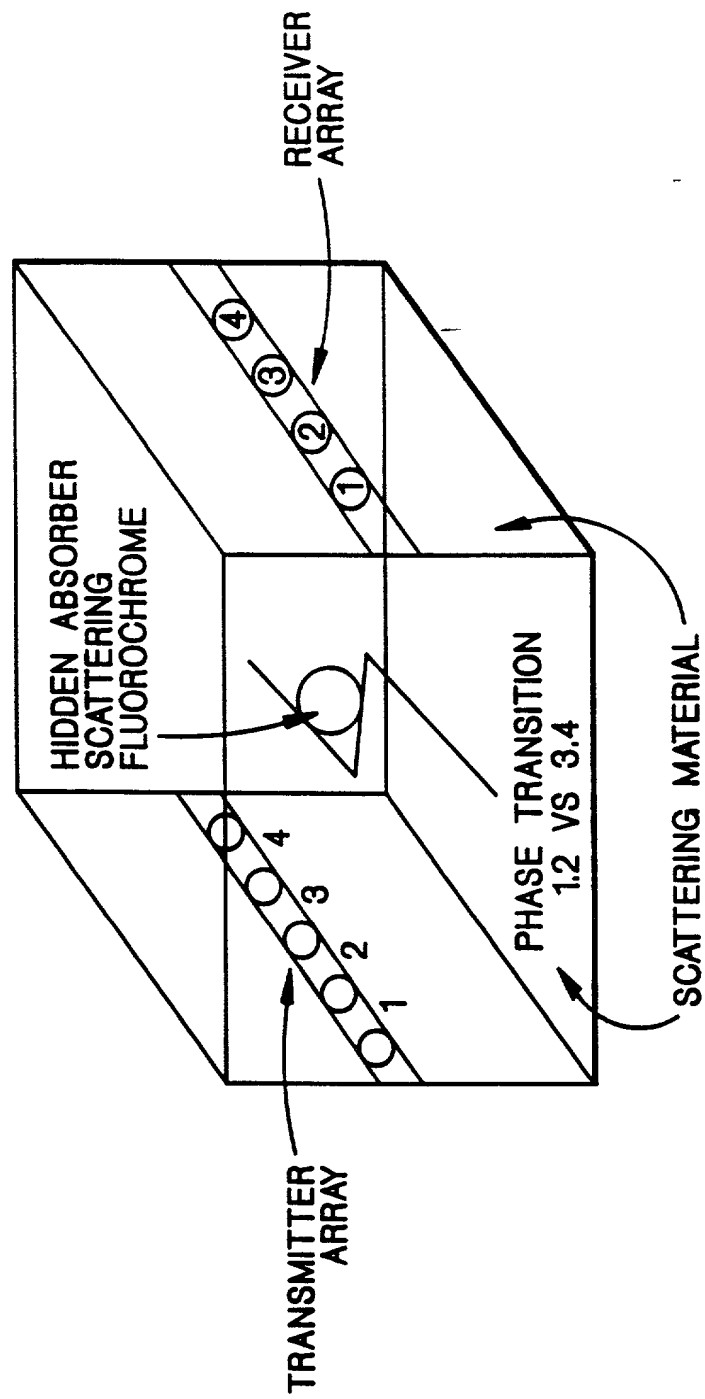


FIG. 2C



**FIG. 2D**



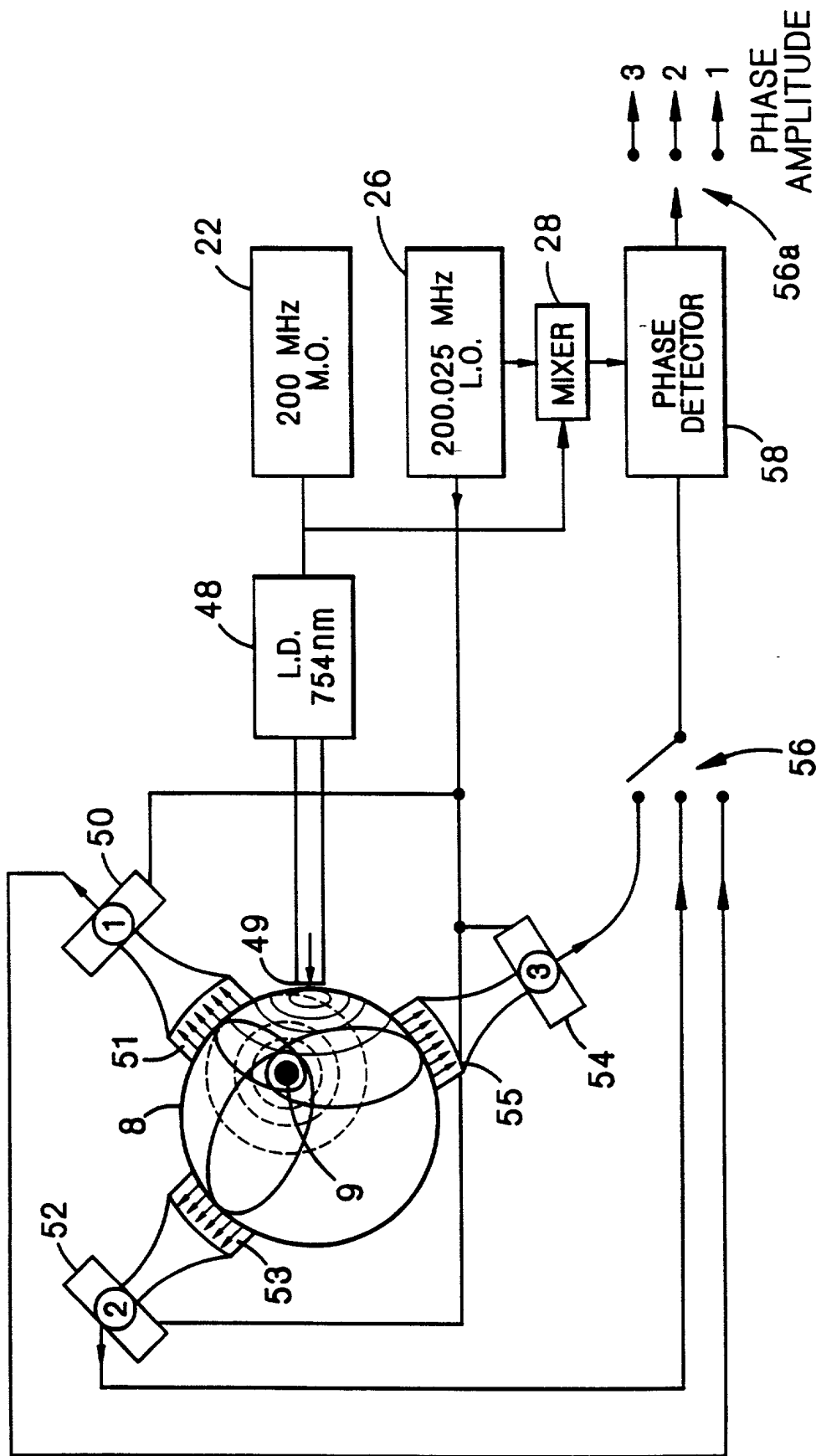


FIG. 3

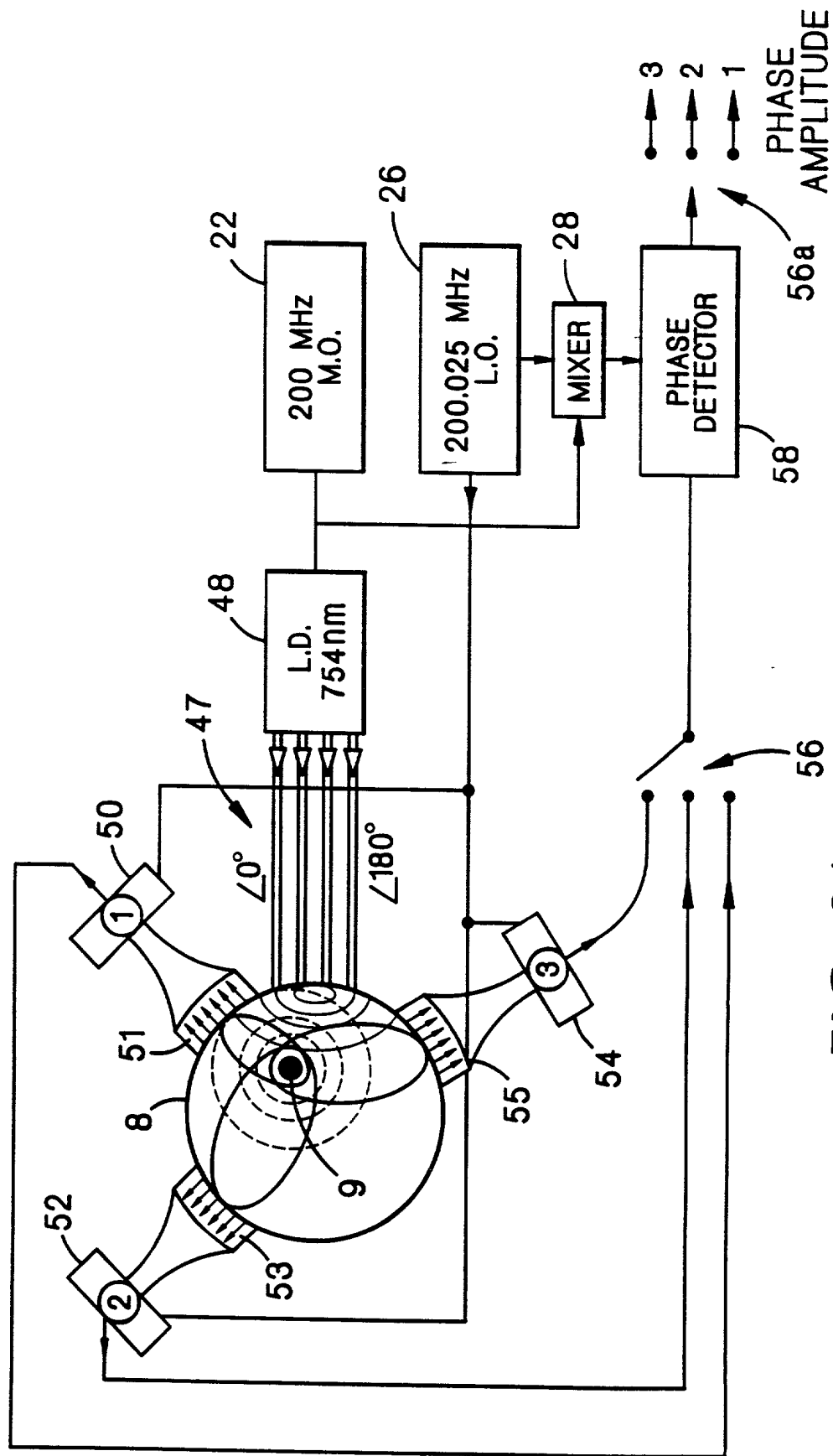


FIG. 3A

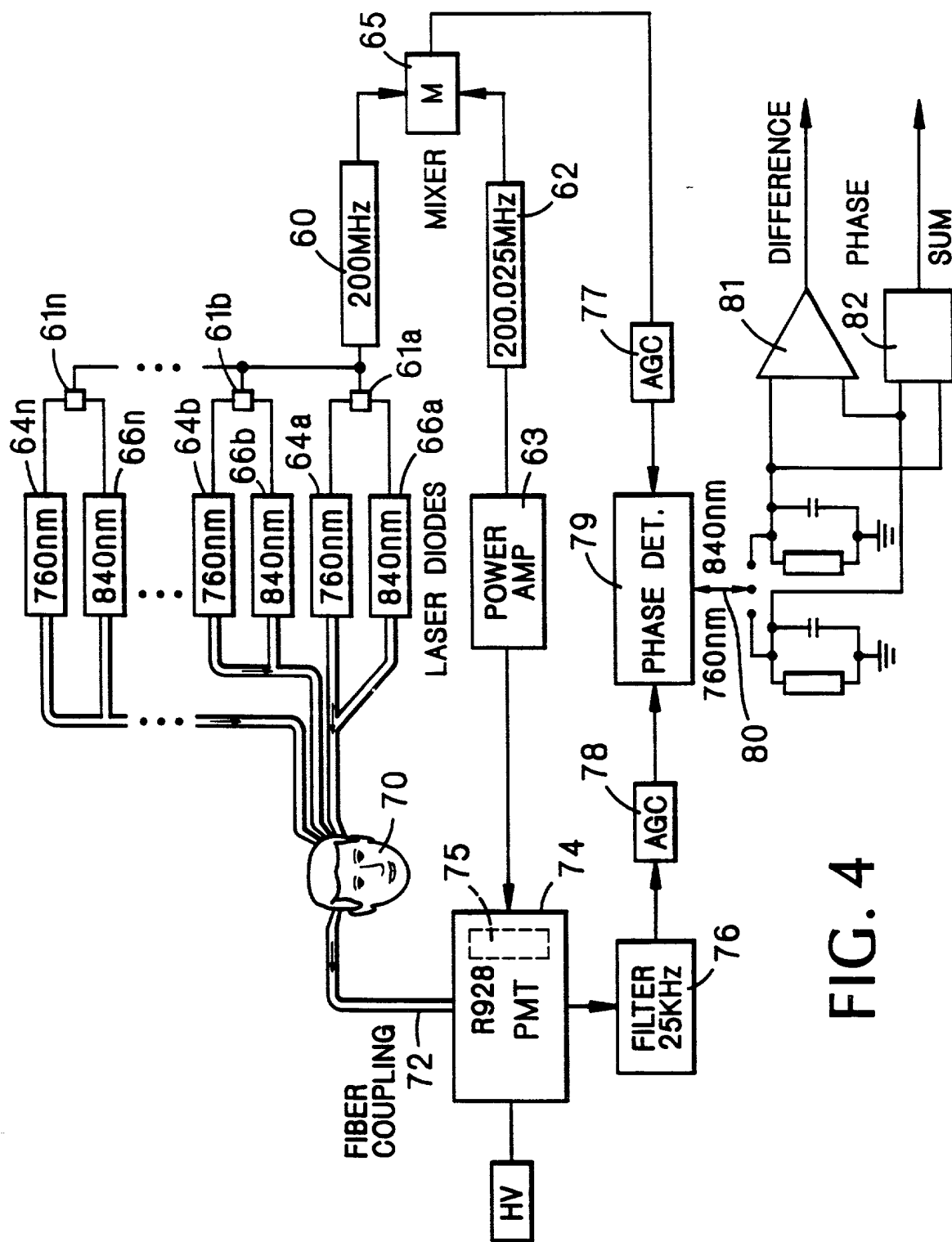


FIG. 4

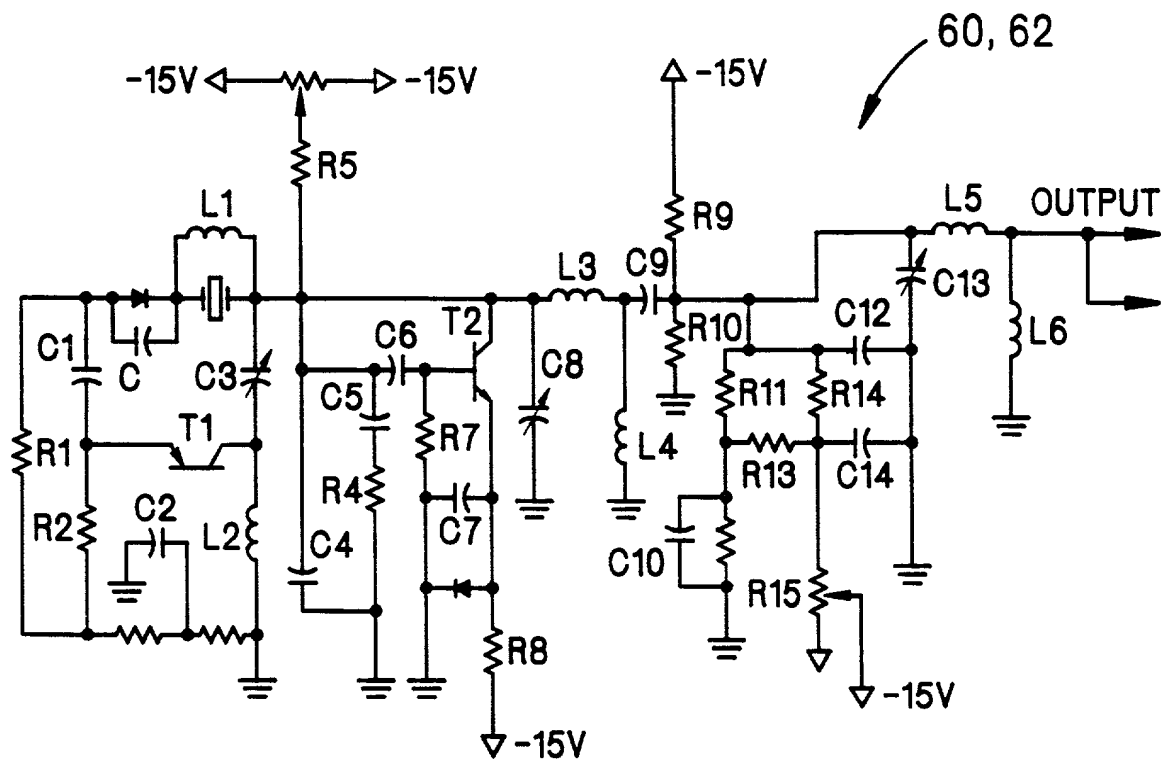


FIG. 4A

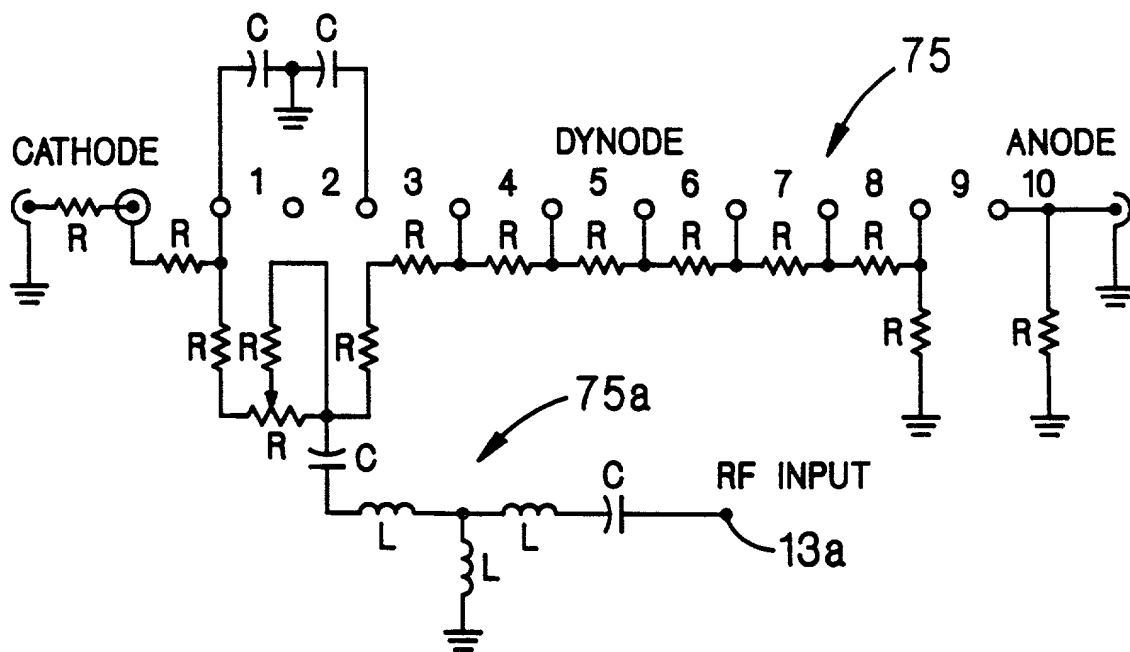
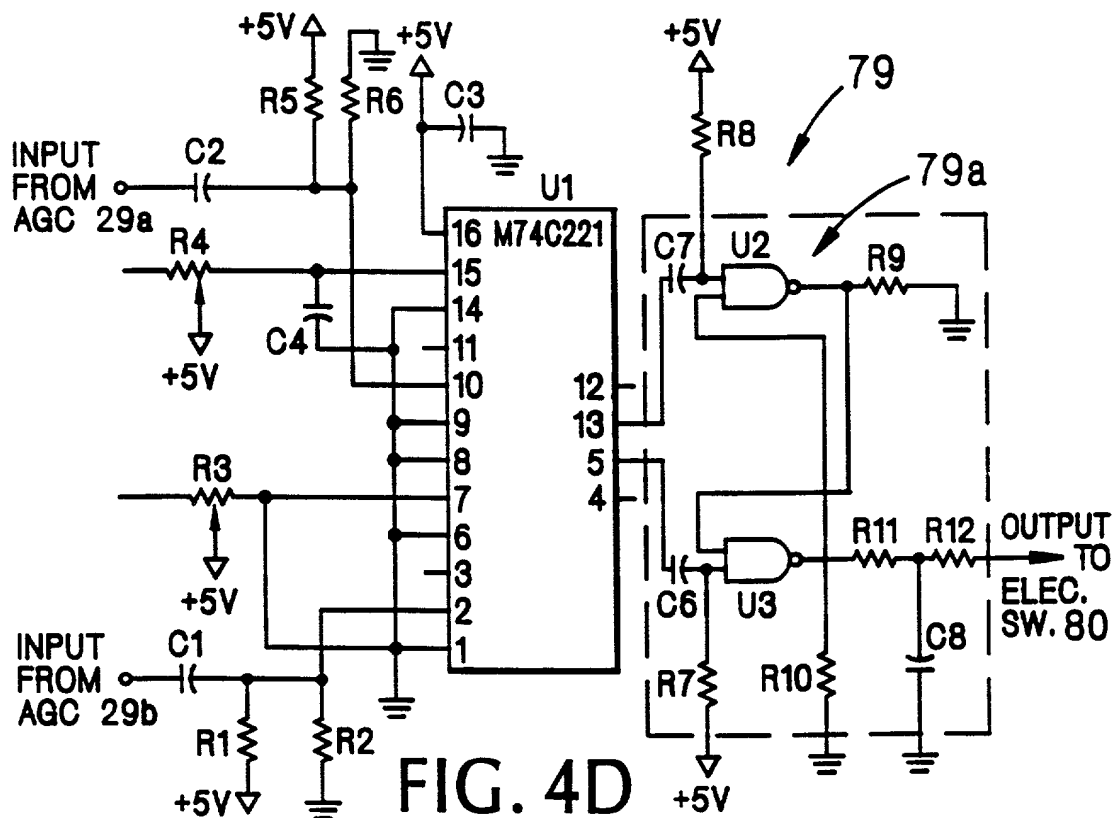
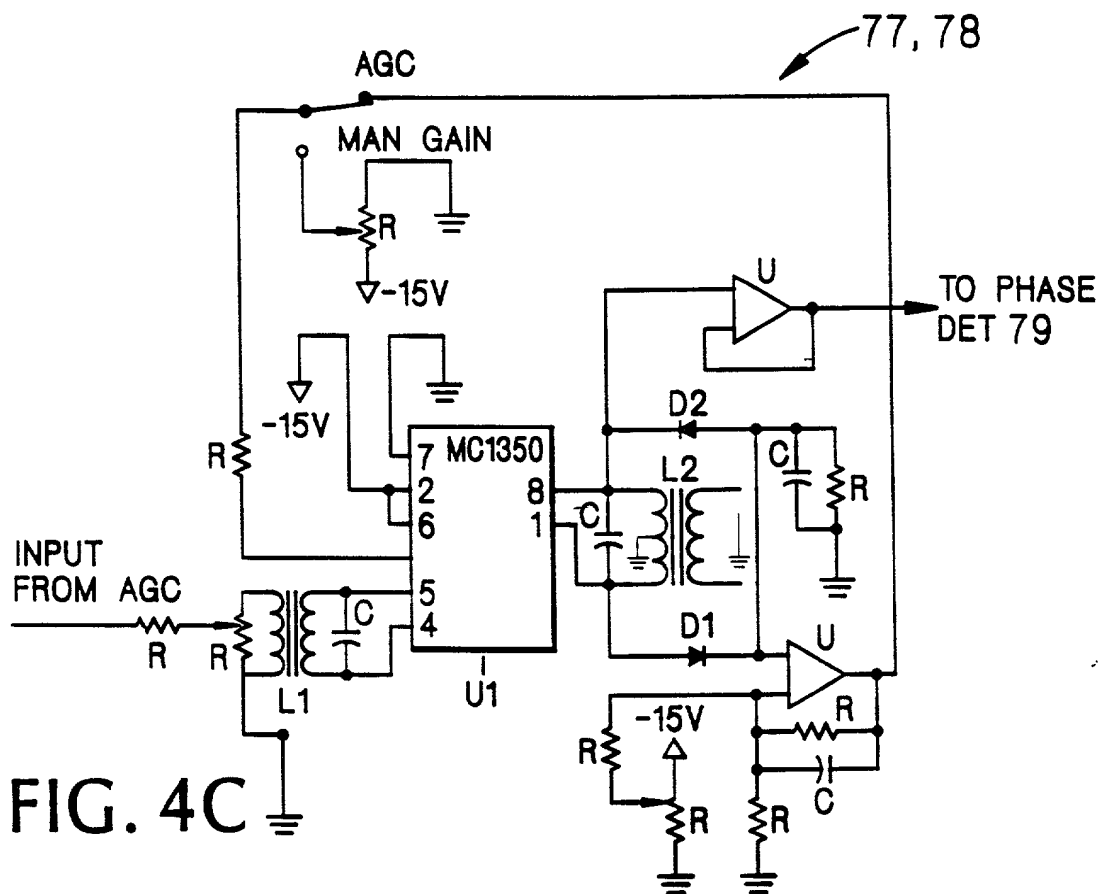
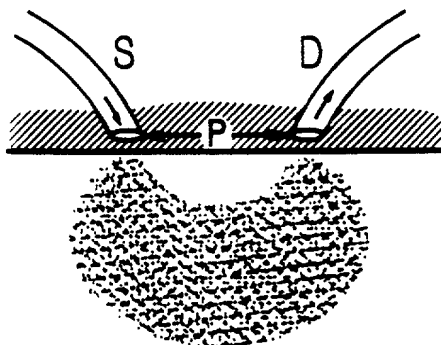
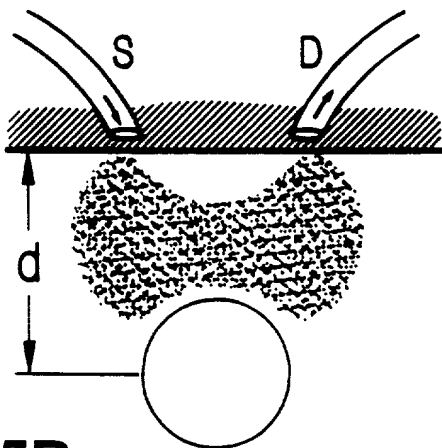
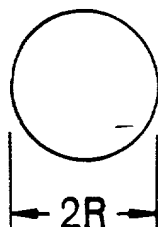


FIG. 4B

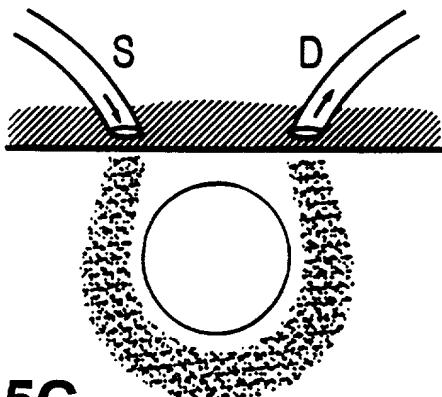




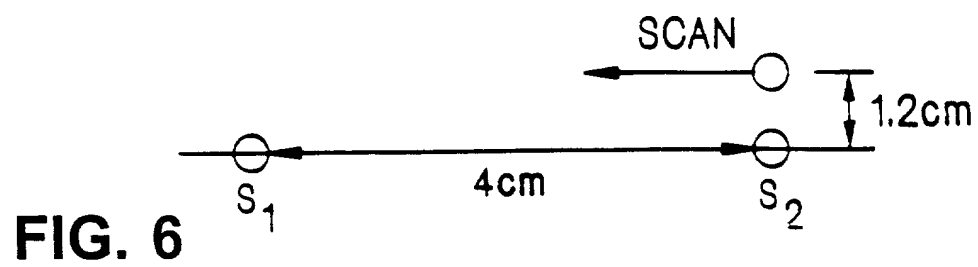
**FIG. 5A**



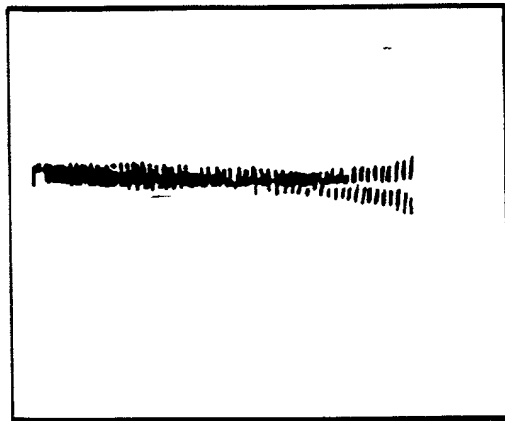
**FIG. 5B**



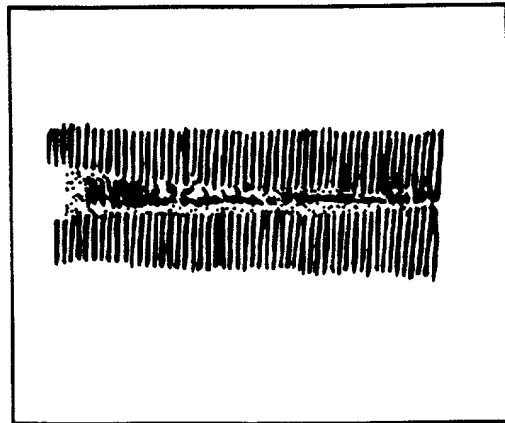
**FIG. 5C**



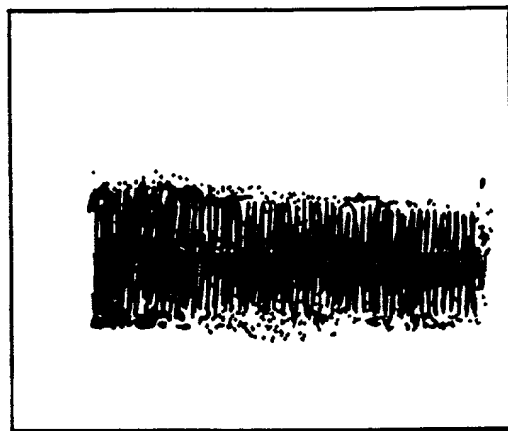
**FIG. 6A**



**FIG. 6B**



**FIG. 6C**



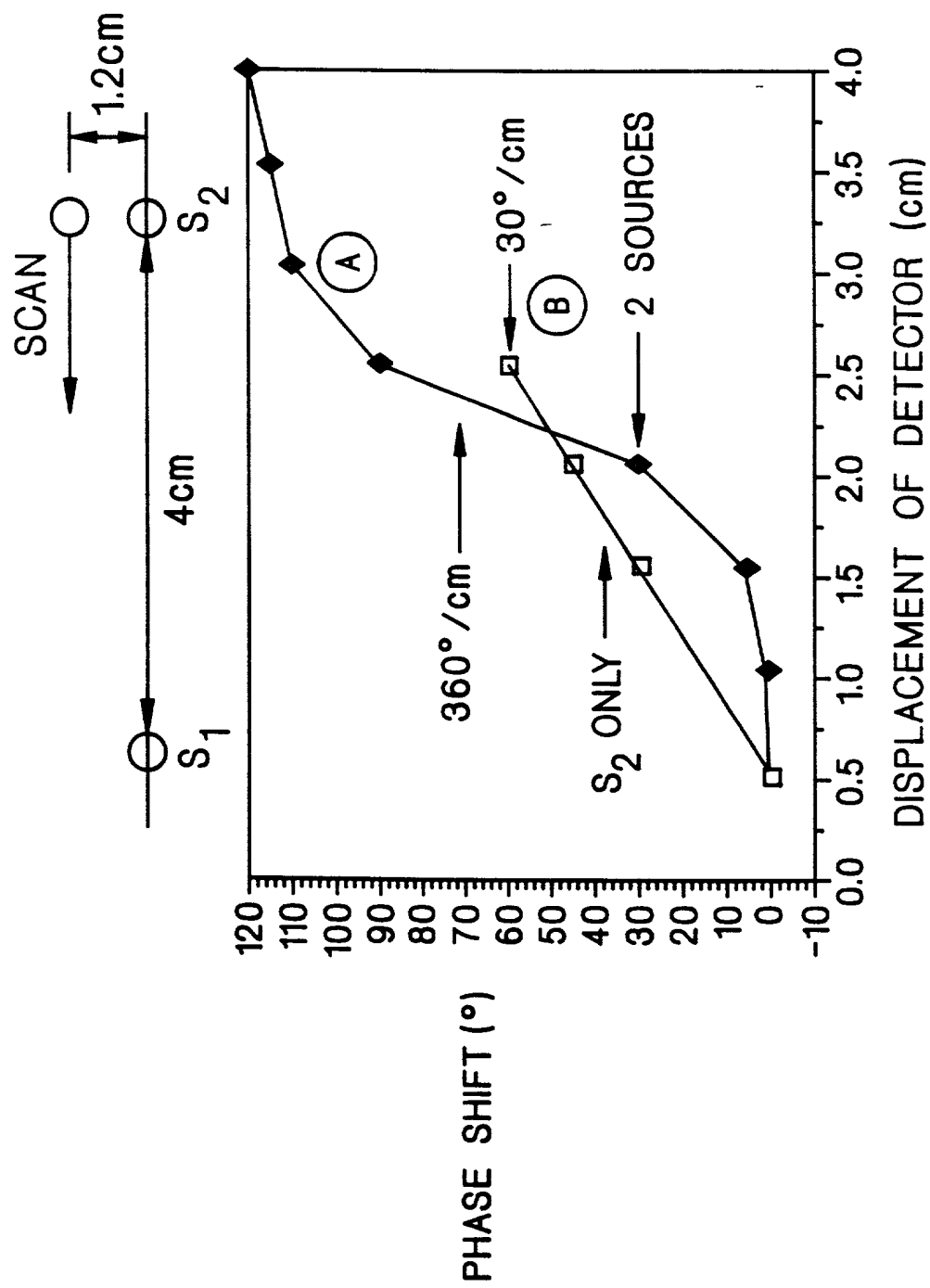


FIG. 7



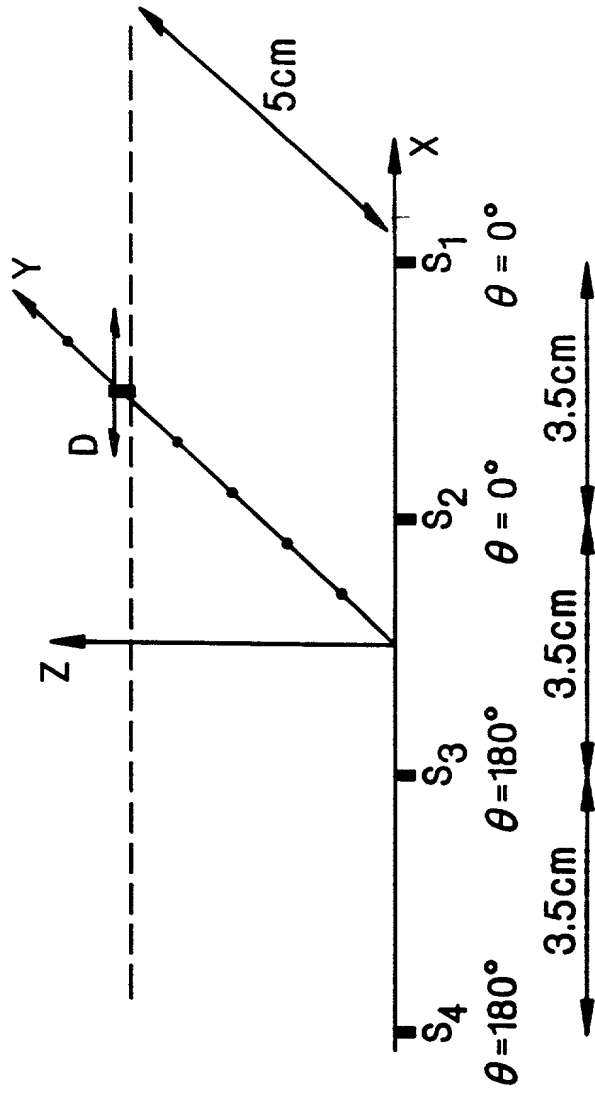


FIG. 8A

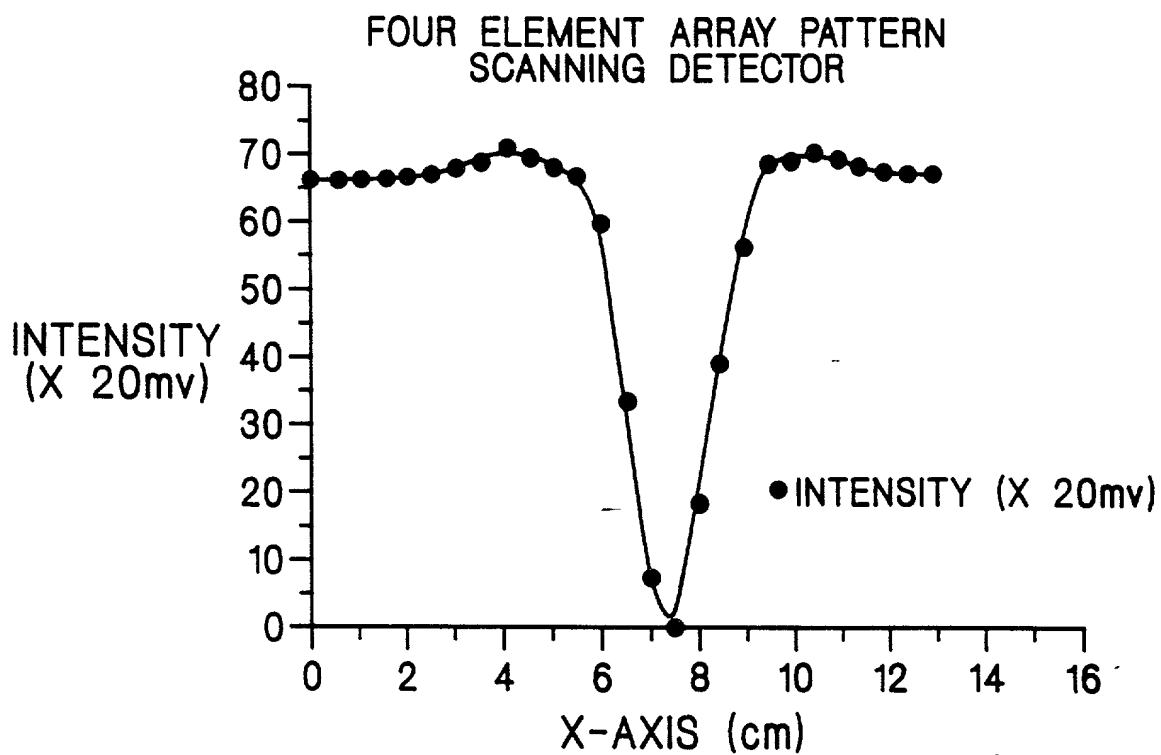


FIG. 8B

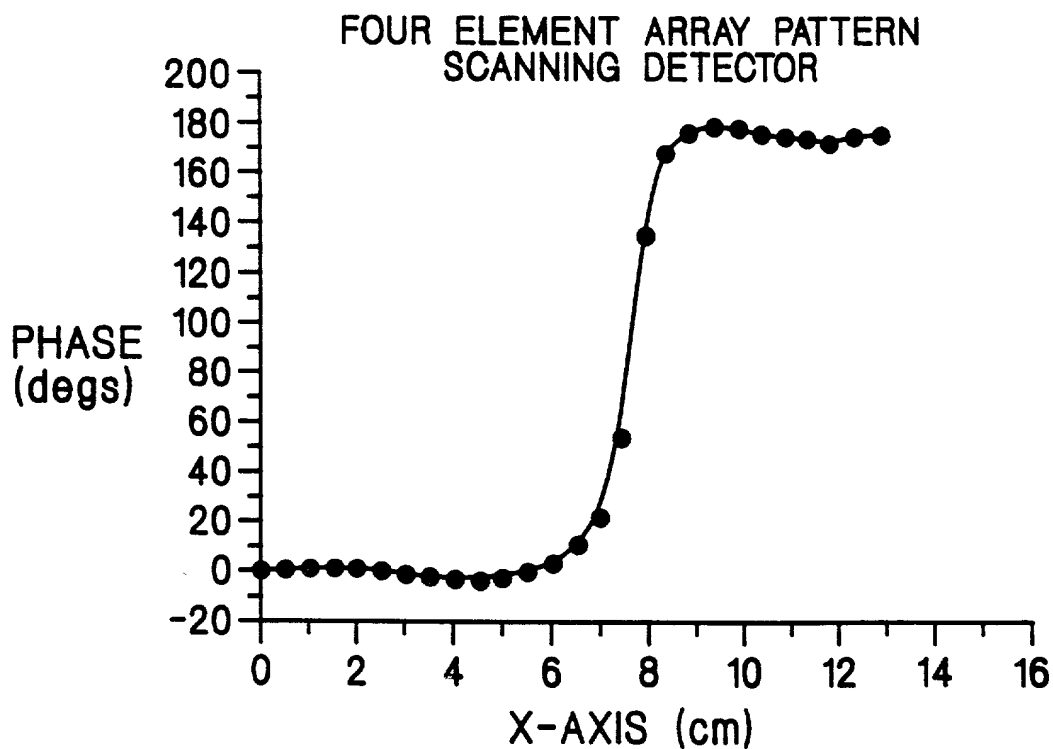


FIG. 8C



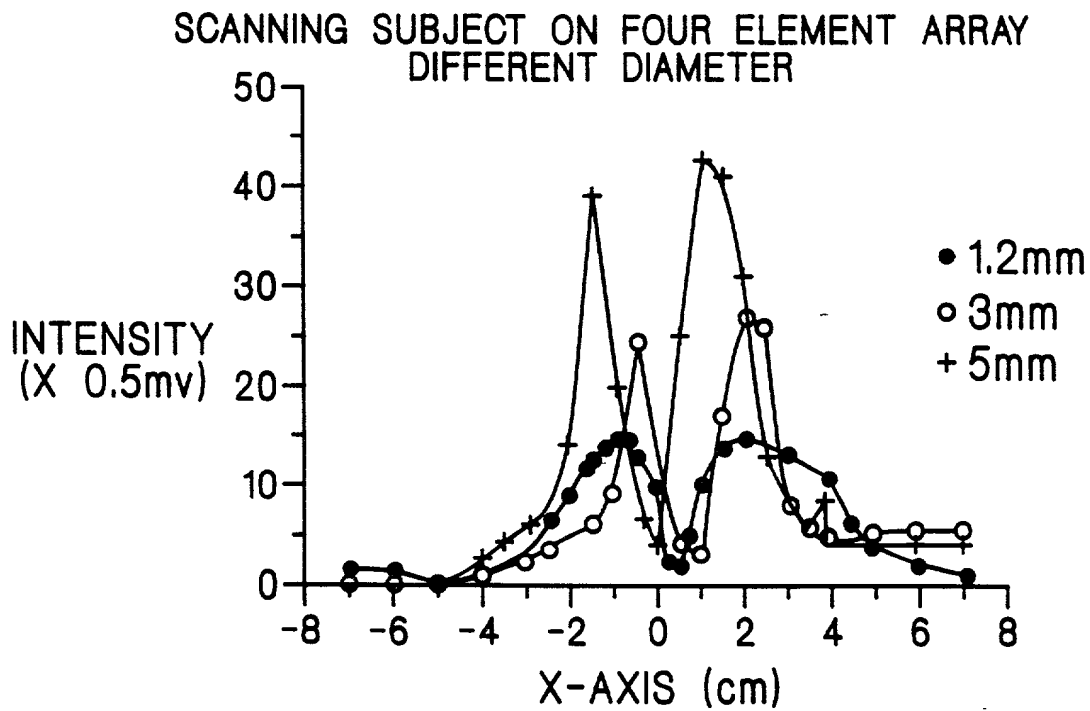


FIG. 9B

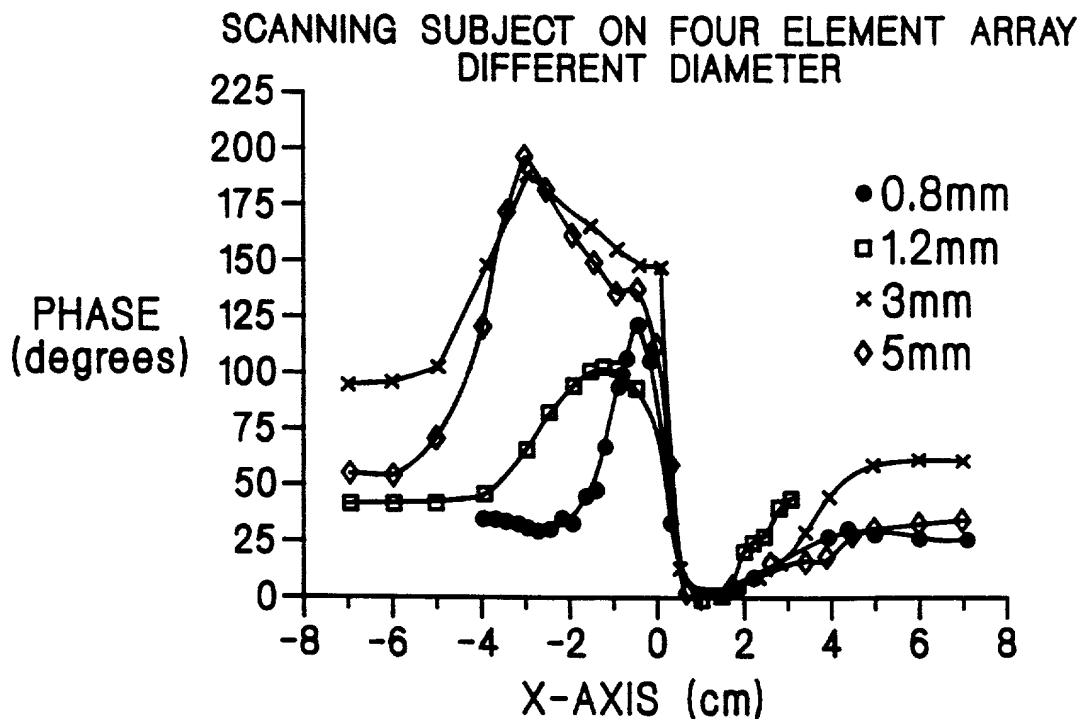


FIG. 9C

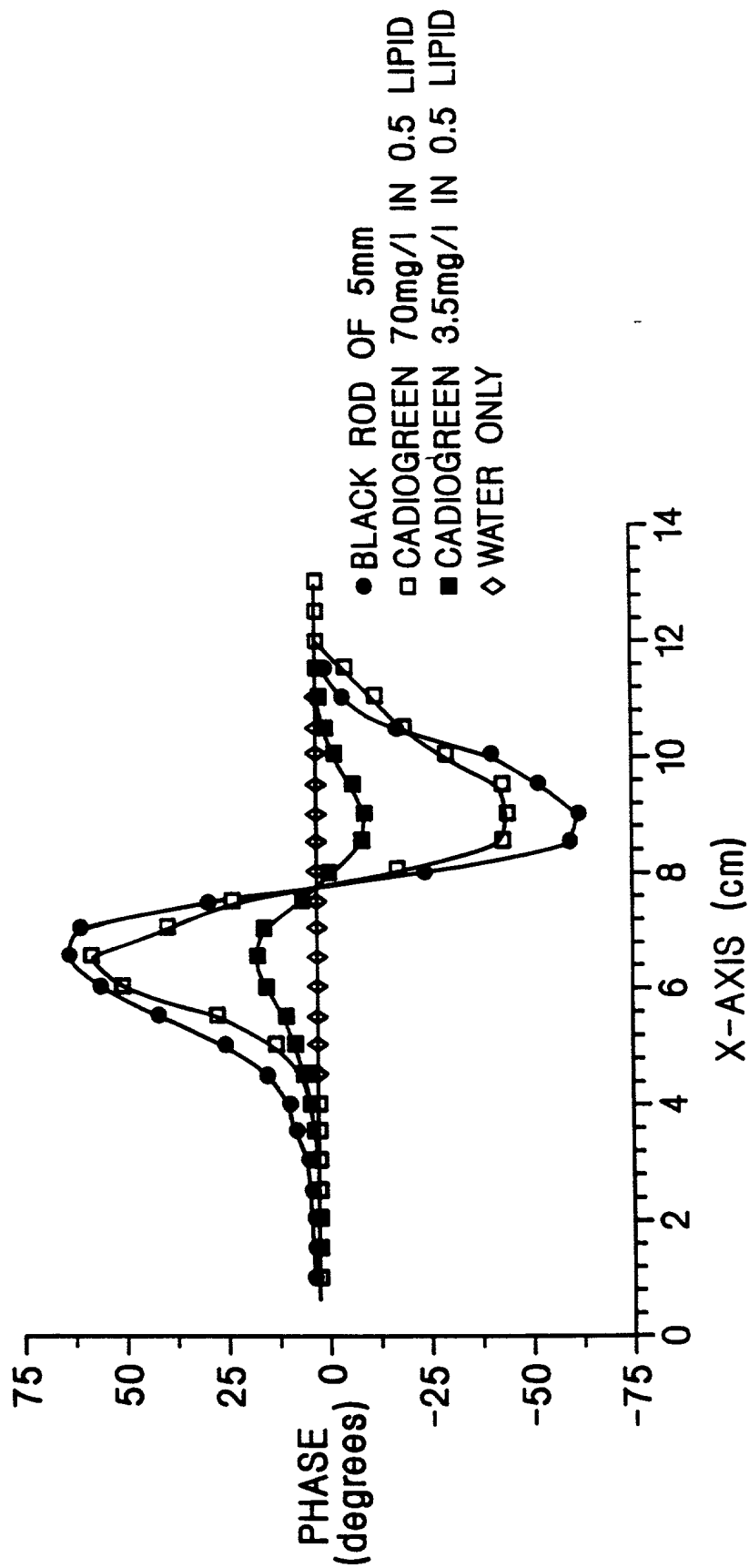


FIG. 9D

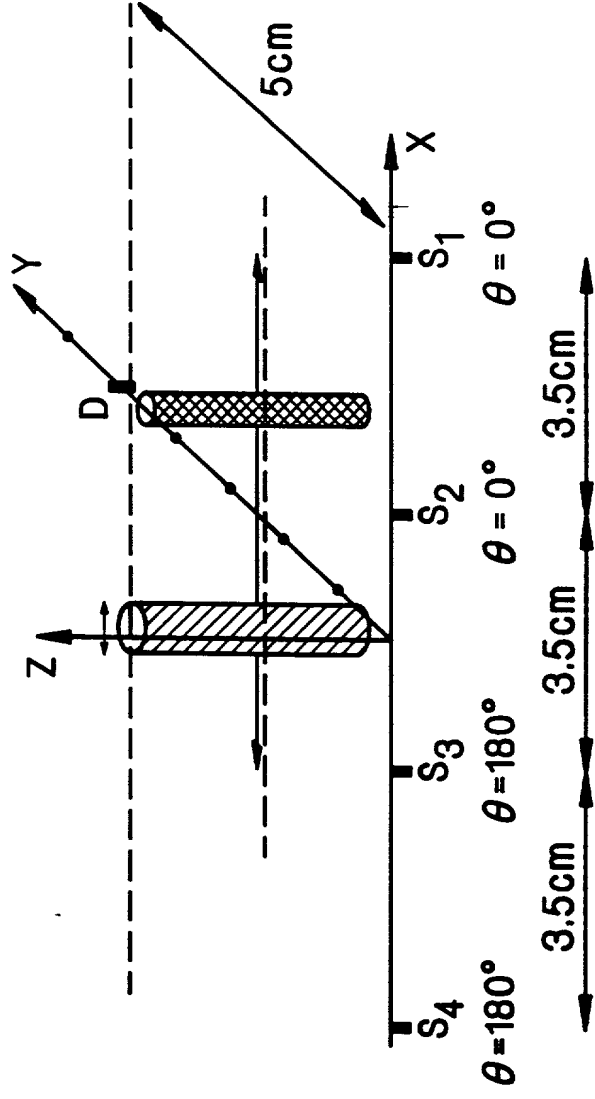


FIG. 10A

# TWO OBJECT SCANNING ON FOUR ELEMENT ARRAY

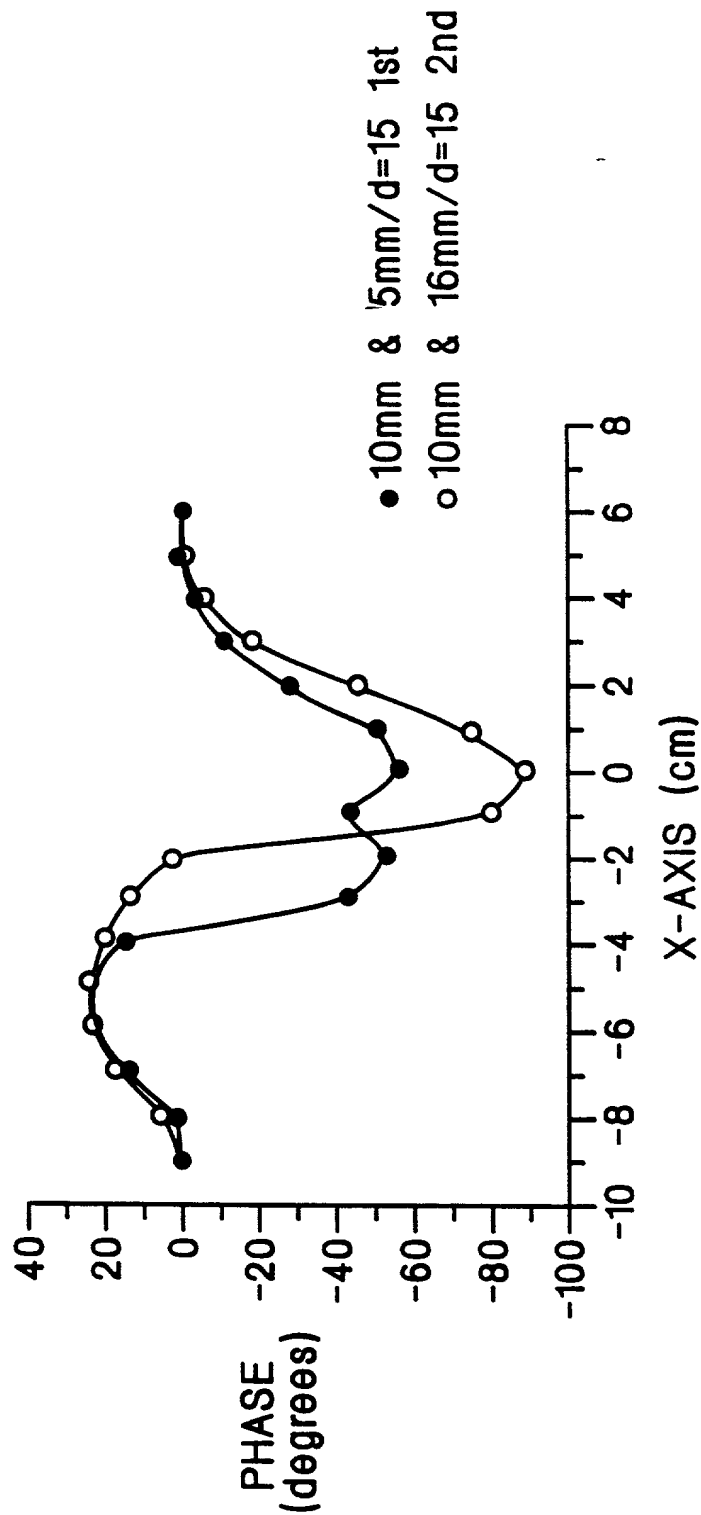


FIG. 10B

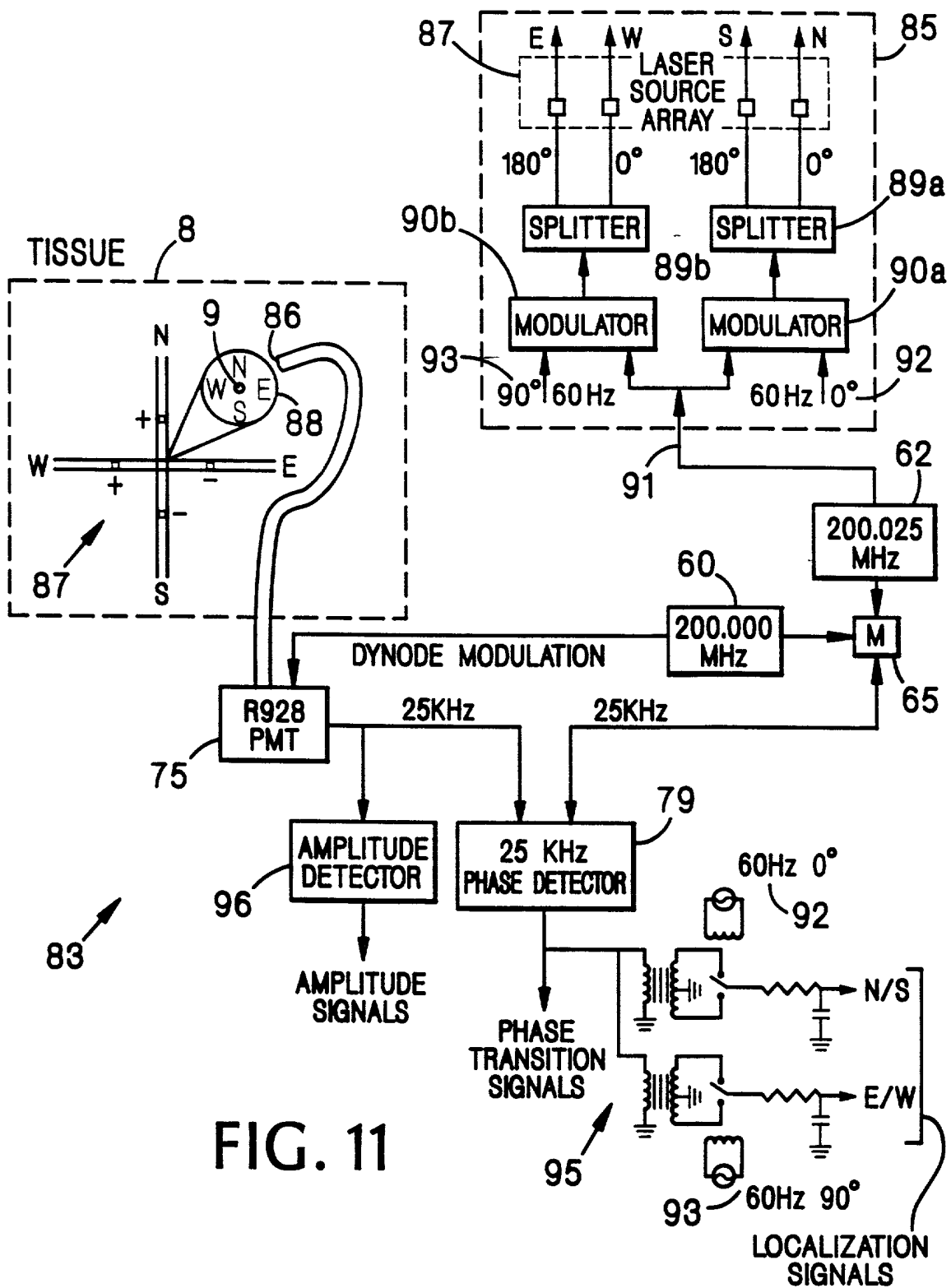
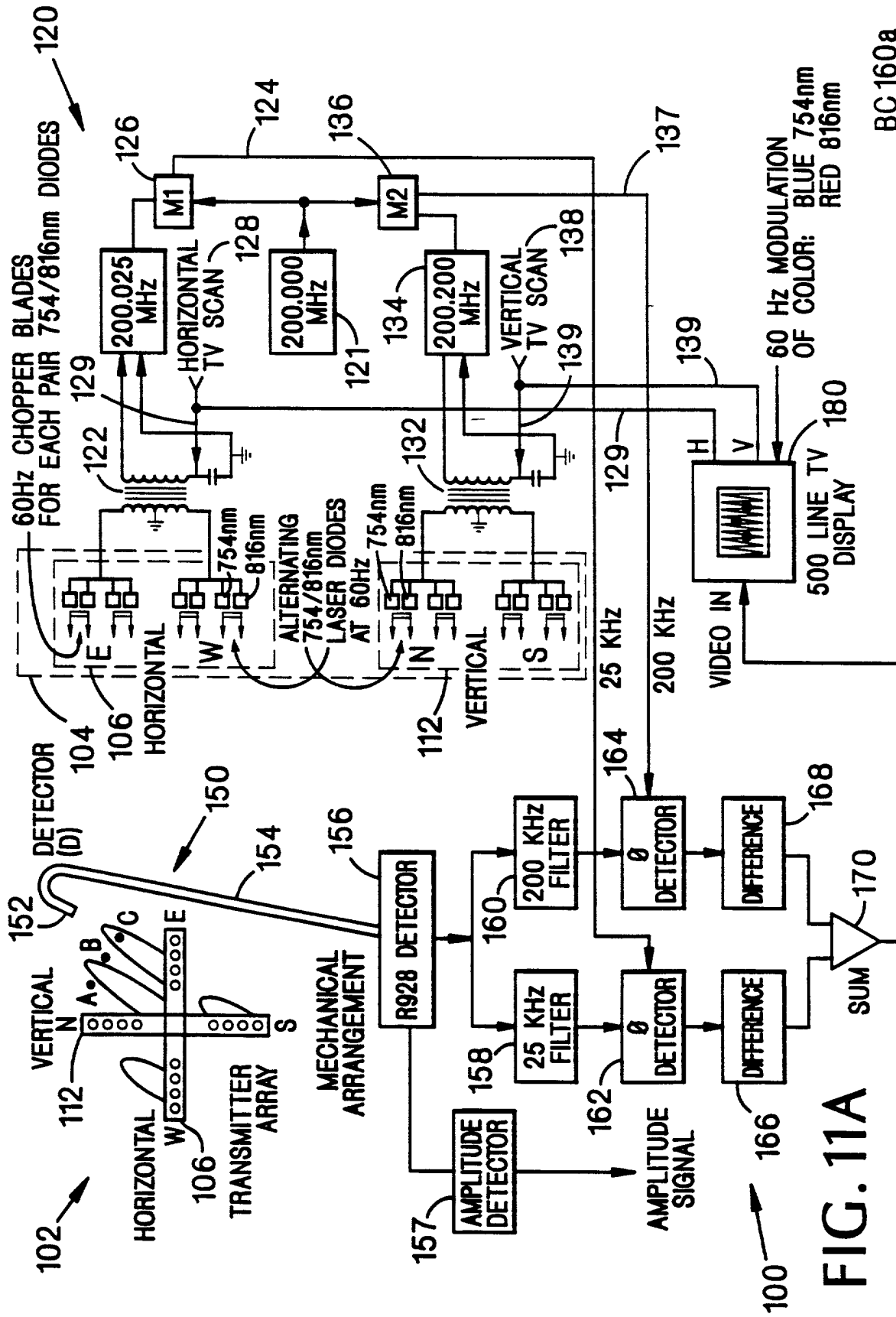
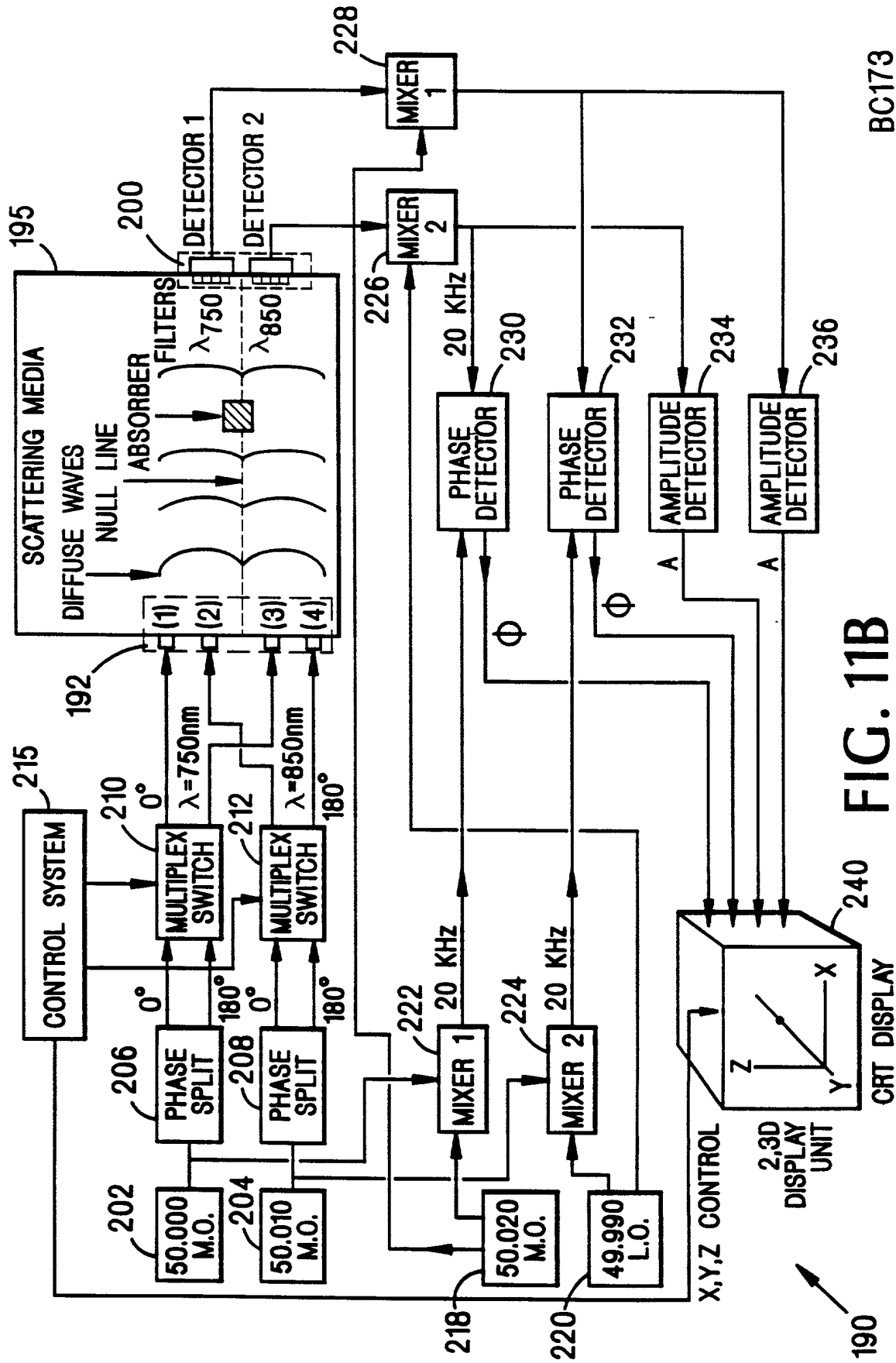


FIG. 11







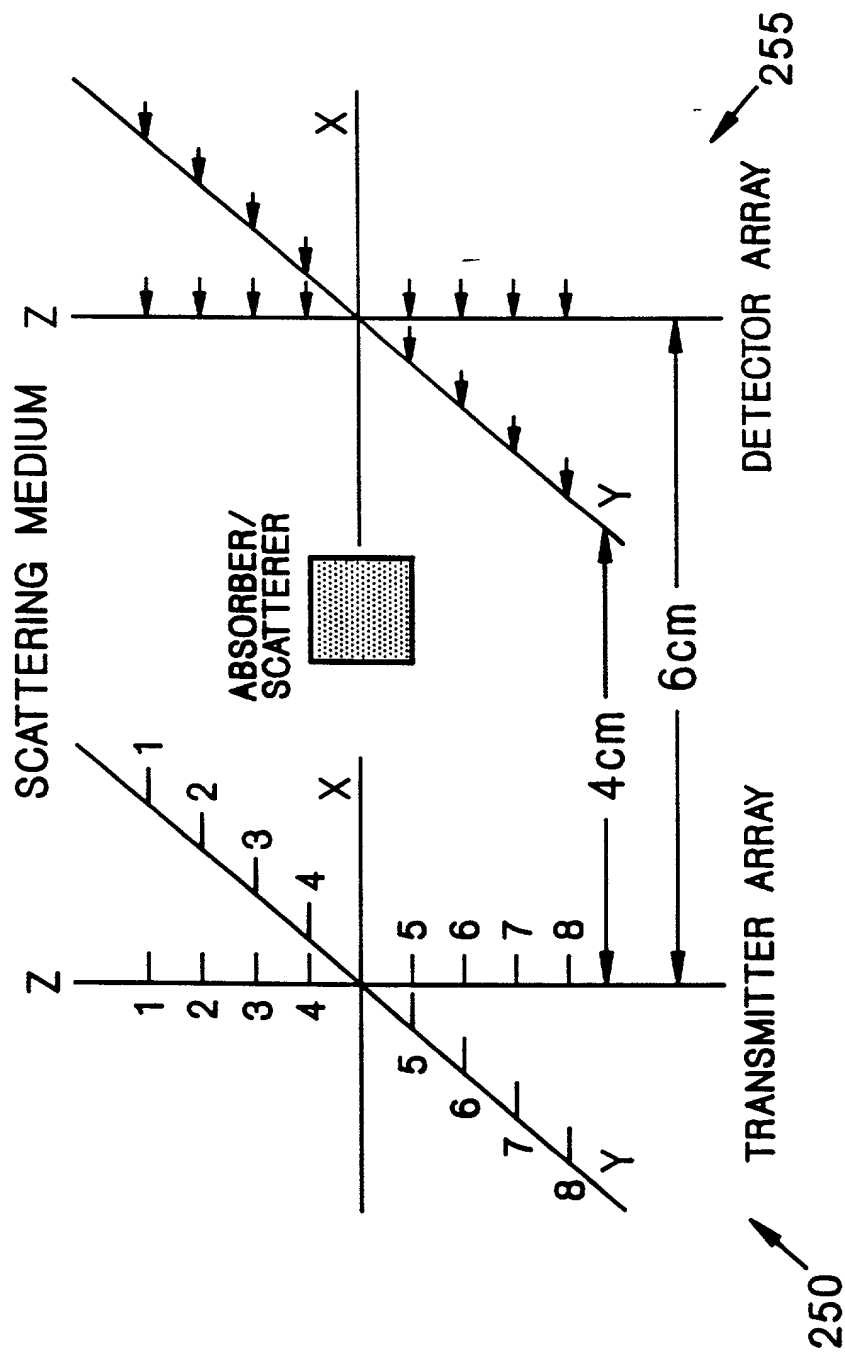


FIG. 12A

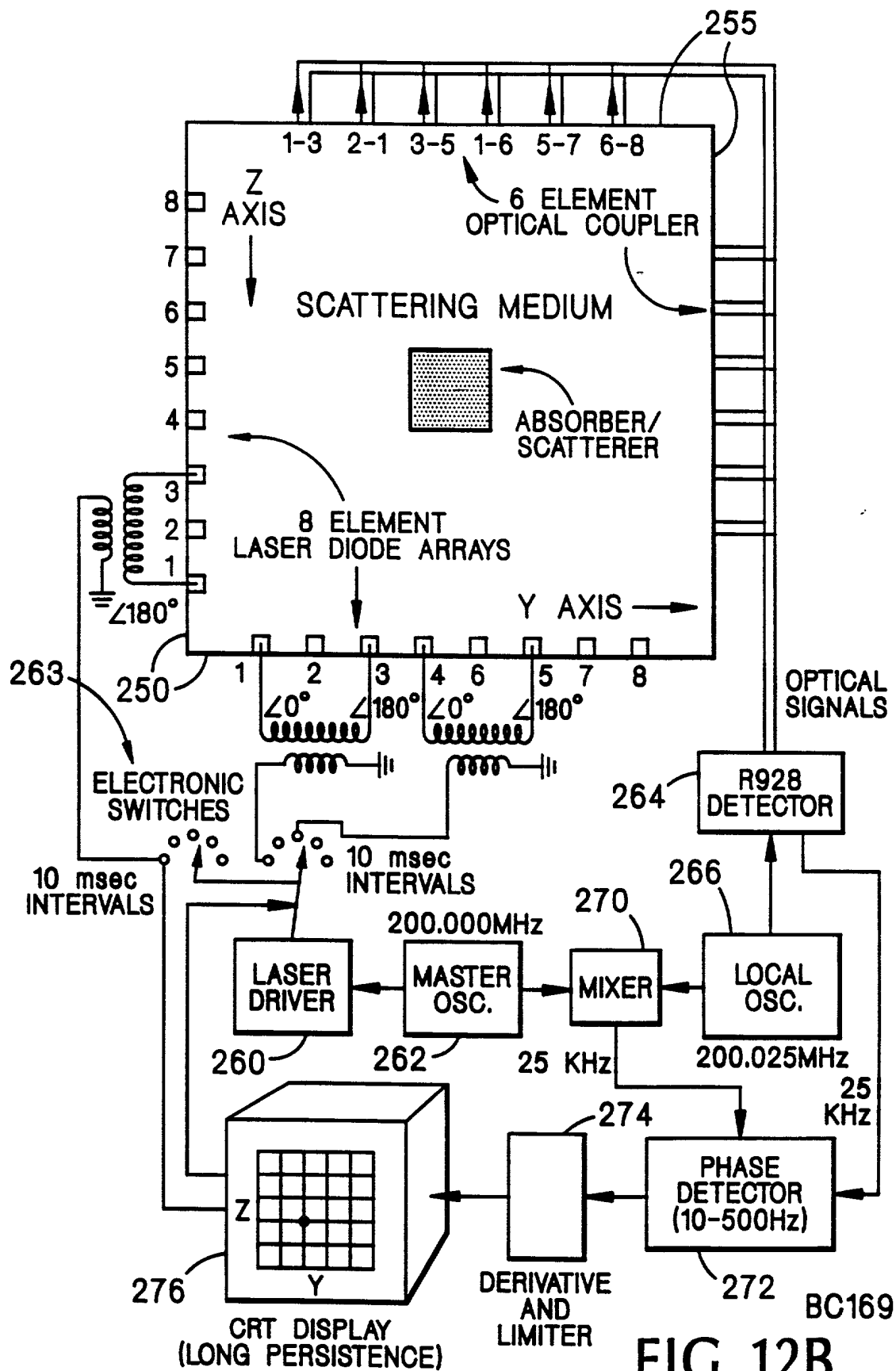


FIG. 12B